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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,530	03/17/2004	Jonathan Bingham	370878005US1	3519

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PERKINS COIE LLP  
PATENT-SEA  
P.O. BOX 1247  
SEATTLE, WA 98111-1247

EXAMINER
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RIGGS II, LARRY D

ART UNIT	PAPER NUMBER
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1609

MAIL DATE	DELIVERY MODE
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07/06/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/802,530

Applicant(s)

BINGHAM ET AL.

Examiner

Larry D. Riggs II

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1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 03 January 2007.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

The abstract of the disclosure is objected to because line 4 provides "may varies" is not grammatically correct. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Loraine et al. (US 2004/0049354).

The instant claims provide a method of displaying an exonic structure of gene variants of a tissue sample, wherein the gene variants' exons are aligned and the exons expression level is indicated.

The instant claims 1 and 8 provide a method of displaying gene variant exon alignments with their relative expression levels.

The instant claim sets 2, 3, 5 and 9, 10, 12 are dependent claims of claims 1 and 8 respectively, wherein the relative expression level is indicated by intensity level of a color or shading and tissue samples are displayed in different colors.

The instant claims 4 and 11 are dependent claims of claims 1 and 8 respectively, wherein representation of gene variants for multiple tissue samples are displayed simultaneously.

The instant claims 6 and 13 are dependent claims of claims 1 and 8 respectively, that provide a method wherein each gene variant is represented by a rectangular region for each exon with a width corresponds to the length of the exon.

The instant claims 7 and 14 are dependent claims of claims 1 and 8 respectively, that provide a method wherein the relative expression level is indicated by height of the rectangle.

Loraine et al. describes a method and system for analyzing alternative splice variant sequences by receiving alternative splice variant sequences that are identified by one or more probe sets, correlating functional domains and associating putative functions based upon a combination of the functional domains. Loraine et al. teaches the illustration of one or more functional domains associated with the alternative splice variants aligned below the representation of the corresponding alternative splice variant with the alignment of their respective exons, (see page 19, paragraph 0134 and 0146, figure 12-1210); translated exons, translated in different frames may be represented by differently colored bars and different representations and/or coloring schemes may be used for representing exons (see page 19, paragraph 0139, see figure 12); and multiple alternative splice variant sequences can be displayed simultaneously, wherein probe sets are capable of preferentially detecting mRNA or other type of transcript or transcriptome from a particular tissue, (see paragraph 0140, figure 12) and the relative

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expression level of the exon in the alternative splice transcripts, wherein various bar heights may occur within each exon and between different exons, (see page 20, paragraph 0144, figure 12-1265); and width of the rectangle exon bar represents the length of the exon, (see page 19, paragraph 0139, figure 12-1203).

Thus, Loraine et al. anticipates claims 1-14.

### ***Conclusion***

No claims allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Larry D. Riggs II whose telephone number is 571-270-3062. The examiner can normally be reached on Monday-Thursday, 7:30AM-5:00PM, ALT. Friday, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on 571-272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LDR/  
Larry D. Riggs II  
Examiner, Art Unit 1631

*John S. Brusca 3 July 2007*  
JOHN S. BRUSCA, PH.D  
PRIMARY EXAMINER